International Journal of Enhanced Research in Medicines & Dental Care (IJERMDC),
ISSN: 2349-1590, Vol. 5 Issue 4, April-2018, Impact Factor: 1.338

Ranula: Report of a Case

Dr. Jogender Kumar Jangra[1], Dr. Shalini Dhiman[2]

[1]MDS (Oral & Maxillofacial Surgery), Consultant Oral Surgeon at Shri Ganesh Dental Clinic and Maxillofacial Centre Rohtak Haryana
[2]BDS (Consultant Dental Surgeon), Shri Ganesh Dental Clinic and Maxillofacial Centre Rohtak Haryana

ABSTRACT

Ranula is a cystic swelling in the floor of the mouth, resulting due to collection of mucous extravasated from sublingual salivary gland. It may extend through the mylohyoid muscles into the neck resulting into plunging ranula. Surgical excision of the ranula along with the involved sublingual gland is treatment of choice with least recurrence rate. The present case is case of ranula in 16 year old boy.

Key Words: Ranula, Sublingual gland, Plunging Ranula,

INTRODUCTION

Ranula refers to a collection of extra glandular and extraductal saliva in the floor of the mouth originating floor of the sublingual gland. The term "ranula" is derived from the Latin word "rana", meaning "frog", and describes a blue translucent swelling in the floor of the mouth reminiscent of the underlying of a frog (1). It rarely occurs, with the incidence being 0.11% (2). Females are more affected than in the ratio of 1:1.4 (3). Most frequently presents in the 2nd and 3rd decades of life. Ranula often protrudes into the floor of the mouth, having only oral component. Ranula can be of three types based on the clinical presentation. "Sublingual ranula" is most common and presents with intraoral sublingual swelling. "Plunging ranula" located cervically beyond the mylohyoid muscle and "Sublingual plunging ranula" having both an oral and cervical component (4).

CASE REPORT

A 16 years old male patient reported to the Shri Ganesh dental clinic with chief complaint of painless swelling in floor of mouth under tongue since one month. Intraoral examination reveals 1.5 cm diameter swelling right side of floor of mouth. Swelling was soft, fluctuant, non progressive, and non-tender, with no localized temperature (Figure 1).

Figure 1: Intraoral view of showing swelling in right side floor of mouth.

Floor of mouth was raised on right side with no discoloration of overlying mucous membrane. Oral hygiene was good and no dental abnormality was detected. On aspiration yellow coloured fluid was aspirated with similar appearance of saliva. CT scan was carried out (Figure 2, 3).

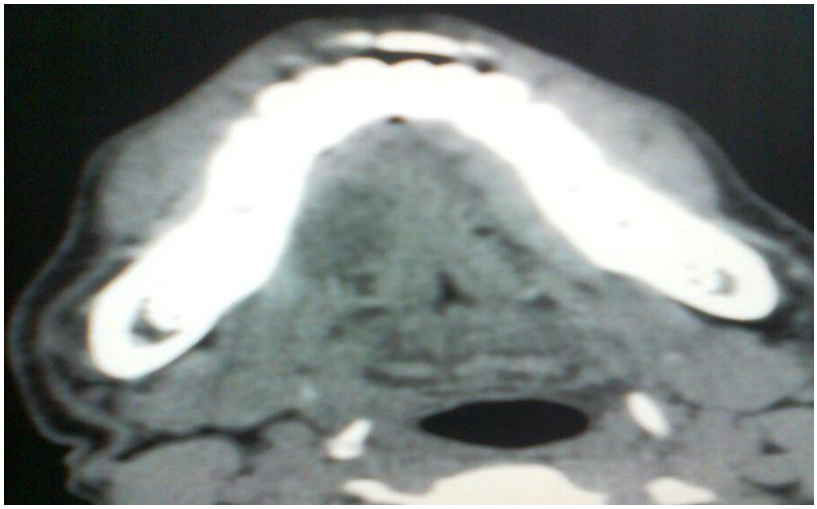

Figure 2: C.T. Scan showing hyper density in right side, parallel to medial surface of mandible in axial section.

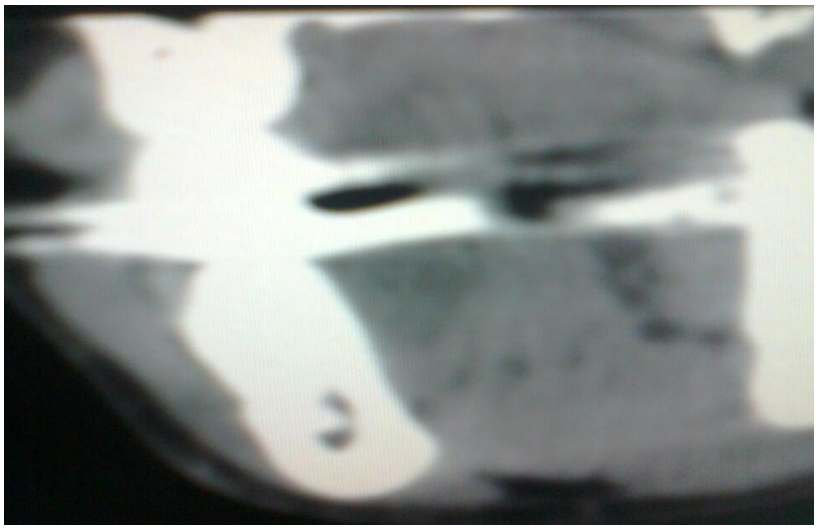

Figure 3: Coronal section of C.T. Scan showing hyper density in right side, parallel to medial surface of mandible

It was clinically diagnosed as ranula. Ranula was exposed (Figure 4) Marsupilisation of ranula was done under local anaesthesia followed by pressure packing with gauge piece to prevent any post operative swelling (Figure 5, 6). The soft tissue lining was sent for histopathological examination. Healing was uneventful.

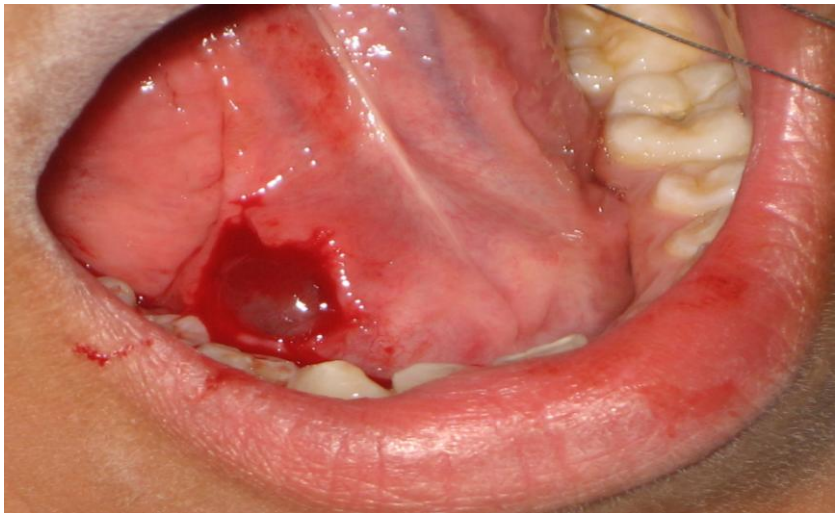

Figure 4: Showing the exposed cystic lining of ranula.

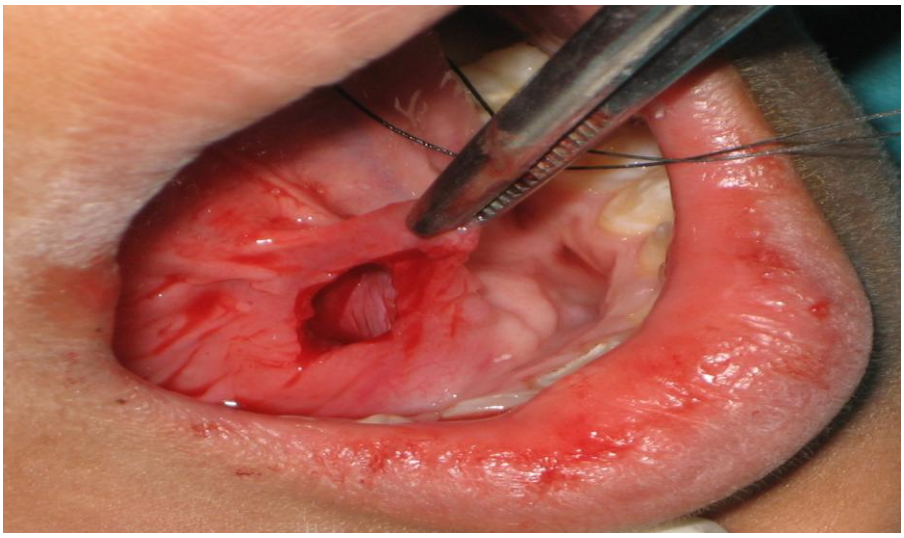

Figure 5: Showing that cyst was marsupialized.

Figure 6: Shows cystic cavity was pressure packed with betadine gauge pack.

DISCUSSION

Ranula classically presents as a soft submucosal swelling in the floor of the mouth (Figure 1). They can be formed either from partial obstruction of a sublingual duct, leading to formation of a retention cyst or trauma can lead to formation of ranulas. These are most commonly observed as a bluish cyst located below the tongue. They may fill the mouth and raise the tongue. Typically, these are painless masses that do not change in the size in response to chewing, eating, or swallowing. Occasionally, pain may be involved (5). Plunging ranulas can manifest as neck swelling in conjunctions with, or independent of, a floor of mouth cyst. The prevalence of ranula is about 0.2 cases per 1000 person and accounts for 6% of all oral sialcysts. Ranula usually occurs in children and young adults with peak frequency in the second decade of life (6).

The diagnosis of ranula is very important because some benign and malignant lesions may have similar clinical presentation. Ranula should be differentiated from various inflammatory and neoplastic lesions of the sublingual and submandibular glands, lymph nodes, granulomatous disease, cystic hygroma, branchial or thyroglossal cysts, laryngocele, dermoid and epidermoid cysts (7). There are no specific diagnostic tests for ranulas. Differential diagnosis should be based on the history of the lesion. In majority of cases it presents as a cystic fluctuant lesion which increase in size gradually over a period of time. Salivary amylase and protein content of the fluid in ranula is higher as compared to serum which further suggests that it originates from sublingual gland having higher protein concentration in its saliva compared to submandibular gland (8). Ultrasonography of sublingual gland is usually inconclusive due to its location. On CT scan, it presents as a ovoid shaped cystic lesion.

The wall of ranula is either very thin or not seen at all. The sublingual ranula is positioned above the mylohyoid muscle and lateral to genioglossus muscle (9). MRI is the most sensitive method to examine the sublingual gland (5). A biopsy of the cystic lining is recommended not only for Histopathological diagnosis, but also to rule out the presence of squamous cell carcinoma arising from the cyst wall and papillary cystadenocarcinoma of the sublingual gland, which may present as ranula (10).

Treatment modalities includes excision of the ranula only, marsupilisation with or without cauterization of the lesion lining, excision of the oral part of the ranula along with the involved sublingual gland, incision and drainage of the lesion via intraoral approach, combined with excision of the sublingual gland via extraoral approach. Excision of the ranula along with involved sublingual gland is the most accepted method with low recurrence rate (11). Baurmash recommended against the sublingual gland removal as the primary treatment modality of ranulas. He advocated marsupilisation followed by positive pressure gauze packing into the cavity not only to seal the initial leak, but also evoke an inflammatory response sufficient enough to initiate fibrosis to permanently seal the leak, leading to acinar atrophy and healing. With this technique, the recurrence rate was reduced to 10 -12% (12). He advocated the radical surgery should be reserved only for plunging ranula and recurrent cases (13). Besides surgical management, CO2 laser, Er, Cr: YSG laser has been used to vaporize ranulas. The complication that may arise as a result of surgical removal of sublingual salivary gland may be paresthesia to the lingual nerve (25%), injury to the Wharton's duct with possibility of sialadenitis, and ductal laceration leading to salivary leakage. Other complication includes hematoma, infection, and dehiscence of the wound.

CONCLUSION

Ranulas are extravasation cysts involving sublingual gland, usually found in the floor of mouth leads to frog' belly appearance in floor of mouth. Surgical excision along with sub lingual salivary gland is treatment of choice with least recurrence rate.

REFERENCES

[1]. Fogan J. Ranula and sublingual salivary gland excision. Open access atlas of otolaryngology, head and neck operative surgery. Creative Commons Attribution; Jan. 2012.
[2]. Axell T. A prevalence study of oral mucosal lesions in an adult Swedish population. Odontol Revy. 1976; 27 (36):1-103.
[3]. Pang CE, Lee TS, Pang KP, Pang YT. Thoracic ranula: an extremely rare case. J Laryngol Otol. Mar 2005; 119(3): 233-4.
[4]. Skouteries CA, Sotereanos GC. Plunging ranula: report of a case. J Oral Maxillofac Surg 1987; 45(120: 1068-72.
[5]. Som PM, Brandwein MS, Curtin HD. Head and neck imaging, salivary gland: anatomy and pathology, Mosby, St Louis, Mo USA 2003 pp 2067-2076.
[6]. Zhao YF, Jia Y, Chen XM, Zhang WF. Clinical review of 580 ranulas. Oral Surg Oral Pathol Oral Radiol Endod 2004; 98(3):280-7.
[7]. Engel JD, Ham SD, Cohen DM. Mylohyoid herniation: gross and histologic evaluation with clinical correlation. Oral Surg Oral Pathol Oral Radiol Endod 1987; 63(1):55-9.
[8]. Roediger WE, Kay S. Pathogenesis and treatment of plunging ranulas. Surg gynecol obstet 1977; 144(6):862-4.
[9]. Charnoff SK, Carter BL. Plunging ranula; CT diagnosis. Radiology 1986; 158(2):467-8.
[10]. Gupta A, Karjodkar FR. Plunging ranula: a case report. ISRN Dent 2011.
[11]. Yoshimura Y, Obara S, Kondoh T, Naitho SI, Scow SR. A comparision of three methods used for treatment of ranula. J Oral Maxillofac Surg 1995; 53(3):280-3.
[12]. Baurmash HD. Marsupialization for the treatment of oral ranulas; A second look at the procedure. J Oral Maxillofac Surg 1992; 50(12)1274-9.
[13]. Baurmash HD. Mucoceles and ranulas. J Oral Maxillofac Surg 2003; 61(3):369-9.